

IN THE CLAIMS.

1. (currently amended) A MRI RF coil array, said array comprising:
a first coil having a null B_1 point and a quasi-one-peak sensitivity profile with only one peak; and
a second coil oriented with respect to said first coil to reduce coupling.
2. (original) A MRI RF coil array according to claim 1, wherein said second coil is within said first coil.
3. (original) A MRI coil array according to claim 1, wherein said second coil overlaps said first coil.
4. (original) A MRI coil array according to claim 1, wherein said second coil is cascaded with said first coil.
5. (original) A MRI coil array according to claim 1, wherein said second coil is solenoidal.
6. (currently amended) A MRI coil array, said array comprising:
a first solenoidal coil having a first section and a second section, said first section having more turns than said second section and said second section having a counter-rotational orientation with respect to said first section, said first coil having a quasi-one-peak sensitivity profile with only one peak; and
a second solenoidal coil, said second coil being oriented with respect to said first coil to reduce coupling.
7. (original) A MRI coil array according to claim 6, wherein said second coil is oriented between said first and second sections.
8. (original) A MRI coil array according to claim 6, wherein said second coil is oriented about said second section.
9. (original) A MRI coil array according to claim 6, wherein said second coil is cascaded with said first coil.
10. (previously presented) A MRI coil array, said array comprising:

a first solenoidal coil having a first section and a second section, said first section having more turns than said second section and said second section having a counter-rotational orientation with respect to said first section; and

a second solenoidal coil, said second coil being oriented with respect to said first coil to reduce coupling wherein said second coil is oriented about said second section.

11. (previously presented) A MRI coil array, said array comprising:

a first solenoidal coil having a first section and a second section, said first section having more turns than said second section and said second section having a counter-rotational orientation with respect to said first section; and

a second solenoidal coil, said second coil being oriented with respect to said first coil to reduce coupling, wherein said second coil is cascaded with said first coil.

12. (new) A MRI coil array according to claim 6, further comprising an orthogonal coil forming a quadrature pair with each of said solenoidal coils.

13. (new) A MRI RF coil array according to claim 1, wherein said second coil is placed near the null B_1 point.

14. (new) A MRI RF coil array according to claim 1, wherein said first coil comprises a plurality of winding sections with the B_1 field produced by one winding section stronger than the B_1 field produced by another winding section.

15. (new) A MRI RF coil array according to claim 1, wherein said first coil comprises a plurality of winding sections, a number of the winding sections based on sensitivity parameters.

16. (new) A MRI RF coil array according to claim 1, wherein said first coil comprises a plurality of winding sections and at least one of (i) a separation between winding sections and (ii) a diameter of the winding sections is based on sensitivity parameters.

17. (new) A MRI RF coil array according to claim 1, wherein said second coil is positioned relative to said first coil based on B_1 field strength.

18. (new) A method for providing a MRI coil array, said method comprising:
configuring a first coil having a null B_1 point and a quasi-one-peak sensitivity profile with only one peak; and

configuring a second coil oriented with respect to said first coil to reduce coupling.

19. (new) A method according to claim 18, wherein said second coil overlaps said first coil.

20. (new) A method according to claim 18, wherein said second coil is cascaded with said first coil.